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EXAMINER

TANG, KAREN C

ART UNIT

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2151

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/978,475	Applicant(s) ROSE ET AL.	
	Examiner KAREN C. TANG	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-16, 24-27 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-16, 24-27, and 30-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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- This action is responsive to the amendment and remarks file on 5/09/08.
- Claims 1-8, 10-16, 24-27, and 30-43 are presented for further examination.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-8, 10-16, 24-27, and 30-38 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Requirement for Information

According to the argument/response filed back in 5/9/08, Page 11, Applicant has admitted that the information in the background of the invention can be considered prior art within the meaning of 35 U.S.C 102.

Applicant need to further amend the statement in "Background of Invention", specifically in page 4 Lines 1-2, in accordance with the statement made above.

Correction is Required.

Rejection of Claims under 35 U.S.C 103

Applicant argues that Gorti in view of Kalkunte did not disclose the "modifying the first predetermined value"

Examiner disagrees. Gorti, in view of Kalkunte and in further view of Bass disclosed "modifying the first predetermined value", specifically, in Gorti, disclosing the limitation in par 0011, basically indicating the predetermined value is being modified.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 39-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly amended claims 39-43 lack supports from the specification. Granted that in applicant's specification, page 16, demonstrates the closest finding to what applicant intended to claim, such as:

“one way to avoid frequently sending rate codes to fabric 202 due to $q(t)$ oscillation around one of the programming quantities $Q(1)$ through $Q(n)$, is to dynamically modify the value $Q(x)$ for comparison with $q(t)$ as the $Q(x)$ threshold is crossed by $q(t)$ from below”

However, is not what is claiming in the limitation, where applicant claimed “wherein the first predetermined value is modified to avoid frequent receipt of the rate control signal due to the oscillation of the quantity of the data stored within the memory device around the first predetermined value.

The limitation is different in scope than what has been stated in the specification.

Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10-16, 24-27, 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorti et al hereinafter Gorti (US 20030007452) in view of Kalkunte et al hereinafter Kalkunte (US 6,118,761) in further view of Bass et al hereinafter Bass (US 7,072,299).

1. Referring to Claims 1, 2, 11, 25, and 38, Gorti disclosed a transmitting device transmitting data at a first non-zero rate to a memory for storage (Queue, refer to 0027, lines 12) therein during a first period of time (traffic, data traffic flow in different time at different rate, refer to 0035, Lines 1-5 and 0027, Lines 16-19 and 0011);
Generating a rate control signal by generating a first data quantity value representing a quantity of data stored in the memory at a first point in time (refer to 0038), comparing the first data quantity value to a first predetermined value (refer to 0038) and; wherein the rate control signal is generated in response to comparing the first data quantity value to the first predetermined value (refer to adjusting the rate, refer to 0038 by sending out signal, refer to 0039); wherein the rate control signal is generated in response to comparing the first rate quantity value to the first predetermined value (refer to 0038);

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In response to receiving the rate control signal, the transmitting device transmitting data at a second non-zero rate to the memory for storage therein during a second period of time (flow rate after increasing, refer to 0033);

Modifying the first predetermined value (reset the threshold, refer to 0011);

wherein the second period of time is subsequent to the first period of time and (the first period of time is before adjusting the rate, and the second period of time is after adjusting flow rate).

transmitting device transmitting data at a third non-zero rate to the memory for storage therein during a third period of time (the delta t, refer to 0039, the system can transmit data periodically at non-zero rate to the queue/pipe);

storage therein during a third period of time (delta t, refer to 0039);

Gorti disclosed wherein the third period of time is subsequent to the first period of time (since the rate of increase is linear, the first rate is going to be less than second rate and the second rate will be less than the third rate),

Although Gorti disclosed the invention substantially as claimed, Gorti is silent regarding the memory is FIFO buffer

Kalkunte, in an analogous art disclosed "the memory is FIFO buffer" (refer to Col 1, Lines 40-55)

Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

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2. Referring to Claims 3, 12 and 26, Gorti disclosed wherein the transmitting device is contained in a switching fabric (24, refer to Fig 1), wherein the memory is contained in a line card coupled (7, 8, and 9, refer to Fig 1) to the switching fabric via a data link (links that connect the line card and the switch), and wherein the transmitter transmits data via the data link to the memory for storage therein (refer to 0007).

3. Referring to Claims 4, 10 and 24, Gorti disclosed a transmit signal (must have a signal in order to control the rate flows); and transmitting the rate control signal to the transmitting device to instruct the transmitting device to stop transmitting data at the first non-zero rate and start transmitting data at the second non-zero rate (refer to 0034-0035); wherein the transmitting device stops transmitting data to the memory device at the first data rate and starts transmitting data to the memory device at the second data rate in response to the transmitting device receiving the rate control signal (refer to 0034-0035).

4. Referring to Claims 5, 13 and 27, Although Gorti disclosed the invention substantially as claimed, Gorti is silent regarding generating first data quantity value representing a quantity of data stored in the memory device at a first point in time; comparing the first data quality value to a first predetermined value; wherein the rate control signal is generated in response to comparing the first data quantity value to the first predetermined value;

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Kalkunte, in an analogous art disclosed generating first data quantity value representing a quantity of data stored in the memory device at a first point in time; comparing the first data quantity value to a first predetermined value (refer to Col 6, Lines 15-55); wherein the rate control signal is generated in response to comparing the first data quantity value to the first predetermined value (refer to Col 6, Lines 55-67).

Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

5. Referring to Claim 6, Gorti disclosed the invention substantially as claimed, Gorti is silent regarding comparing the first data quantity value to a plurality of determined values, wherein the first predetermined value is one of the plurality of first predetermined values; wherein the rate control signal is generated in response to comparing the first quantity value to the plurality of predetermined values;

Kalkunte, in an analogous art disclosed comparing the first data quantity value to a plurality of determined values, wherein the first predetermined value is one of the plurality of first predetermined values (refer to Col 5, Lines 25-55);

wherein the rate control signal is generated in response to comparing the first quantity value to the plurality of predetermined values (refer to Col 8, Lines 15-60).

Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

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Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

6. Referring to Claims 7 and 15, Gorti disclosed the invention substantially as claimed, Gorti is silent regarding generating a second data quantity value representing a quality of data stored in the memory device at a second point in time, wherein the second point in time is prior to the first point in time;
compare first data quantity value to the second data quantity value (refer to Col 7, Lines 1-10);
wherein rate control signal is generated if the first data quantity value is not equal to the second data quantity value.

Kalkunte, in an analogous art disclosed generating a second data quantity value representing a quality of data stored in the memory device at a second point in time, wherein the second point in time is prior to the first point in time (refer to Col 8, Lines 15-40);
compare first data quantity value to the second data quantity value (refer to Col 7, Lines 1-10);
wherein rate control signal is generated if the first data quantity value is not equal to the second data quantity value (refer to Col 9, Lines 25-45). Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

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7. Referring to Claim 8, Gorti disclosed the invention substantially as claimed, Gorti is silent regarding generating total data input count at the first point in time, wherein the total data input count represents a quantity of data input to the memory during a period of time ending in the first point in time;

generating total data output count at the first point in time, wherein the total data output count represents a quantity of data output from the memory device during the period of time ending in the first point in time;

subtracting the total data output count from total data input count.

Kalkunte, in an analogous art disclosed generating total data input count at the first point in time, wherein the total data input count represents a quantity of data input to the memory during a period of time ending in the first point in time (refer to Col 5 Lines 40-55);

generating total data output count at the first point in time, wherein the total data output count represents a quantity of data output from the memory device during the period of time ending in the first point in time (refer to Col 5, 40-55);

subtracting the total data output count from total data input count (Col 5, Lines 40-67). Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

8. Referring to Claim 14, Gorti disclosed the invention substantially as claimed, Gorti is silent regarding a plurality of comparing circuits, each one of which is configured to compare the

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first data quantity value to a respective one of a plurality of predetermined values; wherein the first comparing circuit is one of the plurality of comparing circuits, and wherein the first predetermined value is one of the plurality of first predetermined values;

Kalkunte, in an analogous art disclosed a plurality of comparing circuits, each one of which is configured to compare the first data quantity value to a respective one of a plurality of predetermined values (refer to Col 6, Lines 25-67), wherein the first comparing circuit is one of the plurality of comparing circuits (refer to Col 7, Lines 1-10), and wherein the first predetermined value is one of the plurality of first predetermined values (refer to Col 6, Lines 15-67); Hence, providing functions disclosed by Kalkunte, would be desirable for a user to implement in order to reduce all the network congestion (supported by Bass, refer to Col 1, Lines 15-25).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Gorti by including the features presented by Kalkunte.

9. Referring to Claim 16, Gorti disclosed wherein the first and second circuits are the same circuits (refer to 0082 and 0083).

10. Referring to Claims 30-37, are rejected as the same reason as of Claims 1- 16, 24-27.

11. Referring to Claims 39-43, although Gorti, Kalkunte, and Bass did not explicitly stated the reason (to avoid frequently sending rate codes due to quality of data oscillation around one of

the programmed quantities Q(1) through Q(n)) to modify the first predetermined value, however, it would be obvious that the act of modifying the predetermined value could avoid frequently sending rate codes to fabric due to the oscillation around one of the programmed quantities.

Conclusion

Examiner's Notes: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C. Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/K. C. T./
Examiner, Art Unit 2151

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2151

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